



All

Local Search

Dillard's CLICK HERE TO SEE OUR AD

knoxjobs

Education

SOUTH COLLEGE

Healthcare

SOUTHEASTERN ORTHOPAEDICS

Distribution/Whse

STANDARD AERO

JOBClip

Healthcare

MADIGAN, MARIANNE

Healthcare

WOMEN'S CARE GROUP

JOBClip

Industrial-Trades

VULCAN MATERIALS CO

Construction

LANDDESIGN 1 CHARLOTTE

JOBClip

>> See All Ads <<
>> See All Videos <<

Home » News » Local

PRINT THIS STORY | E-MAIL THIS STORY

Staggering security at new DOE building

\$549M complex about 60% done, will house nation's bomb-grade uranium

By FRANK MUNGER, munger@knews.com
June 18, 2007

OAK RIDGE - With a price tag of \$549 million and a national-security mission, it's designed to be a modern marvel. But it looks like a medieval prison - especially from a distance.

The government's new fortress for bomb-grade uranium is rapidly taking shape on the west end of the Y-12 nuclear weapons plant.



Security is obvious and ominous even before arriving at the construction site. High fences are topped by razor wire, and barriers line the entry route, placed strategically to stall terrorist assaults.

The new facility is impressively forbidding, with massive concrete walls, gun ports galore and special systems in place to safeguard the nuclear assets.

The News Sentinel was granted access to the HEUMF last week, the

first news organization to visit the site. But there were plenty of restrictions (and almost as many escorts) during an hour-long tour.

No cameras. No recorders. No electronics of any kind.

The storage complex won't be loaded with uranium until 2009-2010, and a tour of the facility doesn't expose any classified information.

There is, however, plenty of Unclassified Controlled Nuclear Information at the facility, even during the construction phase, and that makes it difficult for uncleared personnel to visit. UCNI is a nebulous term the Department of Energy assigns to sensitive information that could prove harmful if publicly disseminated.

"It is intended to prevent the release of information that could lead to illegal production of a nuclear weapon or the theft, diversion or sabotage of nuclear material, equipment or facilities," said Steven Wyatt, a federal spokesman at the plant.

During a pretour briefing by Richard Baylor, a classification analyst at Y-12, the News Sentinel was asked not to publish certain details about HEUMF - such as specifics of the floor plan, including the location and number of uranium vaults, and security features not visible to satellite viewers.

Construction of the 110,000-square-foot building is almost 60 percent complete, and work is being accelerated this summer to take advantage of good weather and to regain schedule lost during earlier problems.

Caddell-Blaine, a joint venture of Caddell Construction of Montgomery, Ala., and Blaine Construction of Knoxville, is building HEUMF. About 350 people are working on the project.

Before the tour began, project managers gathered in 998T-25, one of many trailers at the construction site, to discuss the storage facility and its importance. They showed a couple of animated films that depict future operations inside the windowless structure.



BWXT Y-12

The Highly Enriched Uranium Materials Facility, a new storage center for bombgrade uranium, is taking shape at the Y-12 nuclear weapons plant.

RECENT NEWS VIDEOS

Local Video

Previous Local Next Search

TOP KNOXNEWS.COM

STORIES

- Zoning a barrier to regrowth
- Go-ahead likely for Watts Bar finish
- Idea of sale brings questions
- Monroe County thrown for loop by crop circles
- No rain is pain for crops
- 28 exemptions concern some on commission
- Commissioners defend golf trip
- Raising sheep is both hard work, sheer joy
- More guilty pleas, trial dates in 'Rose Thorn'
- Ethics, solid waste on agenda

"Those security doors are massive," Dennis Grove, manager of the projects division at Y-12, remarked at one point as the animation showed the entry into a uranium vault.

At each of the four corners of HEUMF is a tower-like protrusion known as a Tactical Support Area. That's where security police will be situated once the facility becomes operational.

On the east end will be an adjoining structure where workers can load and unload truck shipments without being seen from above. Also, the building's mechanical and electrical infrastructure is housed in a separate facility connected to the south side.

Once construction of HEUMF is completed, the nation's inventory of highly enriched uranium will be consolidated there. The loading is projected to take at least a year. Most of the U-235 is currently housed in five or six facilities at Y-12, but other stocks will be brought to Oak Ridge from other sites around the United States.

The exact amount of Y-12's uranium inventory is classified, but it's estimated to be in the range of 400 metric tons.

Inside HEUMF, a wide corridor connects the different vaults - with plenty of room for workers to move containers of bomb-making material.

Steel racks will be installed inside those vaults to hold "rackable can storage boxes," which are supposed to house several 44-pound buckets of highly enriched uranium. The newly designed storage boxes are filled with material that absorbs neutrons to reduce the chance of fissile uranium achieving nuclear criticality. Some of those boxes are already being loaded to prepare for the move into HEUMF.

According to information provided by BWXT, the plant's managing contractor, the new storage facility will have a capacity of 24,000 containers of enriched uranium. In addition to the buckets loaded into rackable boxes, the storage racks can be reconfigured to hold larger drums, the contractor said.

The building's electricity is not yet turned on, so construction work uses auxiliary power.

Some interior areas were not well lighted on the day of the visit, especially sections where the roof is already in place. The tour was made more interesting by the presence of scaffolding with narrow passages and 2-3 inches of standing water in some areas - the result of a recent rainstorm.

The water relates to another peculiar aspect of the building's design: no drains. That's supposed to preclude the possibility of releasing any nuclear material.

According to project officials, no highly enriched uranium will ever be exposed to air inside the building. Therefore, the facility should be free of contamination.

Packages may be removed from containers, but they will not be unwrapped inside HEUMF, officials said. If it is necessary to process the uranium, the package will be taken to another facility - such as the nearby 9212 complex, the production hub of Y-12, they said.

The giant storage center may become the most important building at the Oak Ridge plant once the strategic nuclear material is loaded into the vaults. But it won't be home to many workers.

Ray Patterson, the project manager for BWXT, said only five or six people would work in operations there. That does not include the number of security guards assigned to the site, which is considered sensitive information.

Construction is supposed to be completed by August 2008, and Patterson said project officials are studying the possibility of adding night shifts to speed the work along.

Three large cranes tower above the work site, moving heavy materials into place. The biggest crane is capable of lifting 64 tons.

Protection against terrorism is top priority at the uranium facility, but there are concerns about natural disasters, as well. A massive excavation and equally massive concrete pour predated the building's construction, connecting the foundation directly to the underlying bedrock.

Senior writer Frank Munger may be reached at 865-342-6329.



Copyright 2007, Knoxville News Sentinel Co.
[Want to use this article? Click here for options!](#)



© 2007 - Knoxville News Sentinel

Other E.W. Scripps sites:



ScrippsNews

Advertising Information: Contact Amanda Aliff.
 uSwitch.com compares gas & electricity, home phone, mobile phones, broadband, credit cards, loans and car insurance

User Agreement
 Privacy Policy
 Subscriptions

Online Media Kit
 Contact Us